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TITLE: AGE ALLOTMENT METHOD

FIELD OF THE INVENTION

- 5 This invention concerns age identification of products which deteriorate as they pass through a distribution chain.

BACKGROUND OF THE INVENTION

The invention will be described with reference to packed foods such as dairy items, but those skilled in the art will appreciate its application to other fields, such as blood banks, storage of chemical compounds, photographic film and the like. It is common to identify packed food with bar codes which can be read by a bar code reader. Usually in addition the pack carries a USE BY date printed in the last stage of production. The wholesaler ships carton loads of product. The shop staff open cartons and display the individual packs on open shelves. In busy, high turnover stores, aging of stock is not an issue, but in others an appreciation of shelf life is vital to profits and customer satisfaction. Every one in the chain must be aware of diminishing time in which the product they are handling remains saleable. Reliance on the USE BY date is unwise as these are frequently overprinted and difficult to read or the print may be pale. When the stock is recalled for some reason, it may be laborious and inconclusive to check each pack by reference to the USE BY date. Consequently shop staff tend to return all stock regardless of age.

SUMMARY OF THE INVENTION

- 20 The method aspect of this invention provides a method of indicating the age of product which deteriorates with age, comprising marking a first batch of product produced between a pair of dates with a colour associated with that period, and marking the second batch of product produced between a subsequent pair of dates with a different colour.
- 25 The period between the first pair of dates and the period between the second pair of dates are preferably consecutive.

Ongoing production may be divided into periods of convenient lengths where food production is under consideration, especially food with a limited shelf life, a period of a few weeks is desirable. This would normally be the period between production and the USE BY date. When food is dried or preserved the period may be months rather than weeks.

The number of periods and therefore the number of colours in a cycle may be selected to suit the product. The cycle may be repeated so that in any one year a cycle which may take from 20 to 40 weeks may recur. A few colours, preferably 2, 3, 4, 5, 6 or 7, suffice to produce a sufficient differentiation for retail purposes. The number of periods and
5 corresponding colours may be selected to facilitate tracing when a batch is listed as defective and must be recalled from sale. If there are only two colours the periods must be long otherwise a recall would return wholesome saleable products along with reject products.

10 I have found that a sequence of 4, 5 or 6 colours each with a period of 4, 5, 6, 7, 8 or 9 weeks suits many retail foods.

Some foods by their packaging permit colour identification better than others. Dairy foods sold in packs are easier to mark in this way than small goods, eg. salami, but the
15 principle is applicable to tagged or wrapped products. When the product is in a pack then preferably the colour is made visible through the pack and therefore the pack lid may be transparent or translucent and the colour applied to a packaging layer, eg. a decal which lies under the surface of the pack. In this way the pack may be of uniform colour, only the colour of the decal changes. Alternatively, the pack itself may have an area of colour.
20 If the machinery providing the colour to the pack fails, the colour may be applied by adhesive label.

It then becomes possible for the production process to produce batches which are uniformly marked. This separation is continued through the retail chain. Shop staff are
25 able to read the age of the product by knowing the time sequence of the colours, green follows red, red follows blue, and so on. The decal may be a foil seal which is visible at the rim of the pack so that it is readily visible to both the shop staff and customer.

For colour blind customers and staff, a plastic tag may be inserted under the lid of the
30 pack bearing the BEST BEFORE or USE BY date, plus the name of the colour all in alphanumeric symbols. In this way the staff need not remember the offending dates and look for tags bearing the colour word, eg. GREEN. Some foods, such as bakery, become

unsaleable in a day or two and the method is modified to operate not between a pair a dates, but to a day of the week, and a colour is allotted to that day. The colour may be applied as a label or a tag also bearing the date applicable by law to the sale of baked food.

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BRIEF DESCRIPTION OF THE DRAWINGS

Certain embodiments of the invention are now described by way of example with reference to the accompanying drawings in which:-

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Figure 1 is a section through a pack.

Figure 2 is a plan of the pack lid shown in Figure 1.

15 Figure 3 is a side view of the pack showing how the coloured part of the label protrudes.

Figure 4 is a colour and period sequence shown as a cycle.

DETAILED DESCRIPTION WITH RESPECT TO THE DRAWINGS

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The dairy factory manufactures flavoured dips from soft cheese. Referring now to the drawings, a controlled weight of 200g of product is dispensed into shallow plastic packs 2, and waxed paper seal 4 is placed on top of the pack before the snap fit lid 6 closes the pack. The seal is circular and overlies the raised rim 8. The lid carries a circular label
25 bearing the manufacturers trade mark, weight, USE BY date and customary information. The annulus 10 and the rim present ring A which is transparent and corresponds to a ring of identifying colour B, 12mm wide around the perimeter of the seal. The packs receive the same seal for weeks 1-6 and they are packed in cartons bearing a seal of the same colour. The shop staff open the cartons and stock the store shelves with the packs,
30 mixing them with packs showing the colour of the previous cycle. This permits efficient stock rotation. The staff use a mnemonic to remember the sequence shown in Figure 3.

At 55 days the colour change takes place and follows through from production to customer. USE BY dates are printed on the lid label but they are a secondary check for the customer at the point of purchase.

- 5 If a recall occurs, the recall instruction only need to specify the colour to show staff which packs to extract from the stock and then the manufacturer is able to specify the USE BY date to reduce the quantity of returns.

- 10 It is to be understood that the word "comprising" as used throughout the specification is to be interpreted in its inclusive form, ie. use of the word "comprising" does not exclude the addition of other elements.

- 15 It is to be understood that various modifications of and/or additions to the invention can be made without departing from the basic nature of the invention. These modifications and/or additions are therefore considered to fall within the scope of the invention. For bread and milk, a 3-7 day cycle is appropriate. For beverages, such as beer, a 25-30 week cycle would be indicated by the bottle cap colour. Dry goods and long life milk may have cycles of 12 months or more indicated on their containers.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A method of indicating the age of a product which deteriorates with age, comprising marking a first batch of product produced between a pair of dates with a colour associated with that period and marking the second batch of product between a subsequent pair of dates with a different colour.
2. A method as claimed in Claim 1, wherein the pairs of dates are consecutive.
3. A method as claimed in Claim 1 or 2, wherein the period is 48-60 days.
4. A method as claimed in any one of Claims 1-3, wherein 4-6 colours denote periods of 4-9 weeks.
5. A food product pack for performing the method of Claim 1, comprising a moulded container with a transparent lid and a label underlying the lid with an annulus of a particular colour which is visible when the goods are stacked.
6. A food wrapper for performing the method of Claim 1, wherein the wrapper has a printed area of a specific colour which is a member of a colour sequence known to the handler of the goods sold in the wrapper.
7. A tag for performing the method of Claim 1, wherein the tag has a printed area of a specific colour which is a member of a colour sequence known to the handler of the goods sold in the wrapper.
8. A method of age allotment substantially as herein described with reference to and as illustrated in Figure 3.
9. Food packaging substantially as herein described with reference to Figures 1, 2 or as modified by Figure 4.